

**Pesticide-Related Illnesses/Injuries Reported by California Physicians
Summarized by Pesticide(s), Type of Illness and Degree of Relationship¹
1999**

PESTICIDE ²	SYSTEMIC ³		EYE ³		SKIN ³		EYE & SKIN ³		TOTAL ³	
	Definite/ Probable ⁴	Possible ⁴	Definite/ Probable ⁴	Possible ⁴	Definite/ Probable ⁴	Possible ⁴	Definite/ Probable ⁴	Possible ⁴	Definite/ Probable ⁴	Possible ⁴
2,4-D	1	0	0	0	0	0	1	0	2	0
Abamectin	0	0	1	0	0	0	0	0	1	0
Acephate	0	1	1	0	0	1	0	0	1	2
Acrolein	1	0	0	0	0	0	0	0	1	0
Adjuvant	0	0	1	0	0	0	0	0	1	0
Agrobacterium Radiobacter	0	0	1	0	0	0	0	0	1	0
Aldicarb	0	1	0	0	0	0	0	0	0	1
Aluminum Phosphide	0	3	0	0	0	0	0	0	0	3
Azoxystrobin	0	0	0	0	0	1	0	0	0	1
Beauveria Bassiana Strain Gha	0	0	0	0	0	1	0	0	0	1
Benomyl	0	0	0	0	1	0	0	0	1	0
Bifenthrin	0	0	0	0	0	1	0	0	0	1
Boric Acid	1	0	0	0	0	0	0	0	1	0
Bromadiolone	2	0	0	0	0	0	0	0	2	0
Butylate	0	1	0	0	0	0	0	0	0	1
Calcium Hypochlorite	4	0	2	0	0	0	0	0	6	0
CAMA	0	0	0	0	0	2	0	0	0	2
Carbaryl	1	0	0	0	0	0	0	0	1	0
Carbofuran	1	0	0	0	0	0	0	0	1	0
Chlordane	3	0	0	0	0	2	0	0	3	2
Chlorine	6	0	0	1	1	0	0	0	7	1
Chlorothalonil	3	0	0	0	0	1	0	0	3	1
Chlorpyrifos	10	13	1	0	0	0	0	0	11	13
Copper Ethanolamine Complex	1	0	0	0	0	0	0	0	1	0
Copper Naphthenate	7	0	1	1	0	0	0	0	8	1

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	Definite/ Probable ⁴	Possible ⁴	Definite/ Probable ⁴	Possible ⁴	Definite/ Probable ⁴	Possible ⁴	Definite/ Probable ⁴	Possible ⁴	Definite/ Probable ⁴	Possible ⁴
Copper Sulfate	1	0	0	0	0	0	0	0	1	0
Creosote	1	0	0	0	0	0	0	0	1	0
Cyanuric Acid	7	0	3	0	1	0	0	0	11	0
Cyfluthrin	14	2	1	0	1	0	0	0	16	2
Cyhalothrin	1	1	0	0	0	0	0	1	1	2
Cypermethrin	7	0	0	0	0	0	1	0	8	0
Daminozide	0	0	0	0	0	1	0	0	0	1
Dazomet	0	0	0	0	0	1	0	0	0	1
Demeton	1	0	0	0	0	0	0	0	1	0
Diazinon	8	67	0	0	1	0	0	0	9	67
Dimethoate	3	0	0	0	0	0	0	0	3	0
Dinoseb	0	0	0	0	1	0	0	0	1	0
Endosulfan	0	1	0	0	0	0	0	0	0	1
EPTC	0	0	0	0	0	1	1	0	1	1
Ethephon	0	0	0	0	1	0	0	0	1	0
Ethion	1	0	0	0	0	0	0	0	1	0
Ethyl Alcohol	0	0	1	0	0	0	0	0	1	0
Ethylene	1	0	0	0	0	0	0	0	1	0
Ethylene Oxide	0	3	0	0	0	0	0	0	0	3
Fenamiphos	0	1	0	0	0	0	0	0	0	1
Fenarimol	0	1	0	0	0	0	0	0	0	1
Fipronil	0	0	1	0	1	0	0	0	2	0
Formaldehyde	1	0	0	0	0	0	0	0	1	0
Gibberellic Acid	0	0	0	0	0	1	0	0	0	1
Glutaraldehyde	10	3	4	0	2	0	0	0	16	3
Glyphosate	6	3	4	3	4	1	0	0	14	7
Glyphosate-Trimesium	1	0	0	0	0	0	0	0	1	0
Hydrogen Chloride	2	0	0	0	0	0	0	0	2	0
Hydrogen Cyanamide	1	0	0	0	0	0	0	0	1	0

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Imidacloprid	1	0	0	0	0	0	0	0	1	0
Iprodione	0	1	0	0	0	0	0	0	0	1
Lime	0	0	1	0	0	0	0	0	1	0
Lime-Sulfur	0	0	0	1	0	0	0	0	0	1
Malathion	2	3	1	0	0	0	0	0	3	3
Mancozeb	0	0	0	0	0	1	0	0	0	1
Mefluidide	0	1	0	0	0	0	0	0	0	1
Metalaxyl	0	2	0	0	0	0	0	0	0	2
Metam-Sodium	131	29	17	1	2	2	0	0	150	32
Methyl Bromide	2	5	1	0	0	0	0	0	3	5
Methyl Isothiocyanate	0	1	0	0	0	0	0	0	0	1
Metolachlor	0	0	1	0	1	0	0	0	2	0
MSMA	2	0	0	0	0	0	0	0	2	0
Naled	2	1	0	0	0	0	0	0	2	1
Nonanoic Acid	1	0	0	0	0	0	0	0	1	0
Oxadiazon	0	0	1	0	0	0	0	0	1	0
Oxyfluorfen	0	2	0	0	0	0	0	0	0	2
Ozone	1	0	0	0	0	0	0	0	1	0
Para-Dichlorobenzene	0	8	0	0	0	0	0	0	0	8
Paraformaldehyde	1	0	0	0	0	0	0	0	1	0
Paraquat	1	1	2	1	4	1	0	0	7	3
Pentachlorophenol	0	1	0	0	0	0	0	0	0	1
Permethrin	6	1	1	0	0	0	0	0	7	1
Peroxyacetic Acid	1	0	1	0	0	0	0	0	2	0
Petroleum Hydrocarbons	0	0	0	1	0	0	0	0	0	1
Phenolic Disinfectants	2	0	3	0	1	2	0	0	6	2
Phorate	2	0	0	0	0	0	0	0	2	0
Phosmet	1	0	0	0	0	0	0	0	1	0
Pine Oil	2	0	5	0	0	0	0	0	7	0

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Propargite	0	4	0	0	2	1	0	0	2	5
Propetamphos	20	0	0	0	0	0	0	0	20	0
Propiconazole	0	1	0	0	0	0	0	0	0	1
Propoxur	2	0	0	0	0	0	0	0	2	0
Pyridaben	0	0	0	0	0	1	0	0	0	1
Quaternary Ammonia	7	1	26	1	10	0	2	0	45	2
Resmethrin	1	0	0	0	0	0	0	0	1	0
Sabadilla	0	1	0	0	0	0	0	0	0	1
Sodium Bisulfite	0	0	0	0	0	0	1	0	1	0
Sodium Hypochlorite	120	11	61	4	5	9	2	2	188	26
Sodium Tetrathiocarbonate	1	0	0	0	0	0	0	0	1	0
Strychnine	1	0	0	0	0	0	0	0	1	0
Sulfur	10	3	1	3	1	5	0	1	12	12
Sulfur Dioxide	0	0	1	0	0	1	0	0	1	1
Sulfuryl Fluoride	2	3	0	0	0	0	0	0	2	3
Tebuconazole	1	0	0	0	0	0	0	0	1	0
Tralomethrin	1	0	0	0	0	0	0	0	1	0
Triclopyr	0	0	0	0	1	0	0	0	1	0
Trifluralin	0	0	0	0	2	0	0	0	2	0
Warfarin	0	0	0	0	0	1	0	0	0	1
Combinations Of Antimicrobials	29	1	7	0	4	3	0	0	40	4
Combinations Of Fumigants	7	6	0	0	2	0	0	0	9	6
Combinations Of Fungicides	2	6	1	0	0	5	0	0	3	11
Combinations Of Herbicides	7	7	3	1	4	2	0	0	14	10
Combinations Of Insecticides Including Cholinesterase Inhibitor(s)	28	27	2	1	2	7	0	0	32	35
Combinations Of Insecticides Without Cholinesterase Inhibitor(s)	28	3	2	0	0	1	0	0	30	4
Miscellaneous Combinations	45	27	4	5	4	22	4	2	57	56

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Unknown	4	2	2	0	1	2	0	0	7	4
Unknown Antimicrobial	7	0	1	0	0	1	0	0	8	1
Unknown Insecticide	3	0	0	0	0	0	0	0	3	0
TOTAL	591	260	167	24	60	81	12	6	830	371

1. **Source:** California Department of Pesticide Regulation, Pesticide Illness Surveillance Program.

2. **Pesticide:** Name of pesticide active ingredient.

3. **Type of Illness:** Categorization of the type of symptoms experienced.

- Systemic : Any health effects not limited to the skin and/or eye. Cases involving multiple illness symptom types including systemic symptoms are included in the systemic category.
- Eye : Health effects involving only the eyes. This excludes outward physical signs (miosis and lacrimation) related to effects on internal bodily systems. These signs are classified under 'Systemic'.
- Skin : Health effects involving only the skin.
- Eye/Skin : Health effects involving only the eye and skin.

4. **Relationship:** Degree of correlation between pesticide exposure and resulting symptomatology. The term "pesticide-related" refers to cases that fall into one of the three following relationships.

- Definite : High degree of correlation between pattern of exposure and resulting symptomatology. Requires both medical evidence (such as measured cholinesterase inhibition, positive allergy tests, characteristic signs observed by medical professional) and physical evidence of exposure (environmental and/or biological samples, exposure history) to support the conclusions.
- Probable : Relatively high degree of correlation exists between the pattern of exposure and the resulting symptomatology. Either medical or physical evidence is inconclusive or unavailable.
- Possible : Some degree of correlation evident. Medical and physical evidence are inconclusive or unavailable.

Whom to Contact:

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About the Pesticide Illness Surveillance Program Data

Pesticide-related illnesses have been tracked within the state of California for nearly 50 years. The California Environmental Protection Agency, Department of Pesticide Regulation (DPR) maintains a surveillance program which records human health effects of pesticide exposure. The Pesticide Illness Surveillance Program (PISP) documents information on adverse effects from pesticide products, whether elicited by the active ingredients, inert ingredients, impurities, or breakdown products. This program maintains a database, which is utilized for evaluating the circumstances of pesticide exposures resulting in illness. This database is consulted regularly by staff who evaluate(s) the effectiveness of the DPR pesticide safety programs and recommend changes when appropriate.